



June 28, 2013

Office of Environmental Information  
(Mail Code: 28221T)  
Docket #EPA-HQ-ORD-2013-0189  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., N.W.  
Washington, DC 20460

Re: Docket ID No. EPA-HQ-ORD-2013-0189: Comments of Pebble Limited Partnership

Dear Sir or Madam:

On behalf of the Pebble Limited Partnership (“PLP”), I submit these comments on the April 30, 2013 U.S. Environmental Protection Agency’s (“EPA’s”) report entitled “An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska (Second External Review Draft)” (“the Assessment”).

According to EPA’s Executive Summary, the “ purpose of the assessment is to characterize the biological and mineral resources of the Bristol Bay watershed, increase understanding of the impacts of large-scale mining on the region’s fish resources, and inform future government decisions related to protecting and maintaining the physical, chemical, and biological integrity of the watershed.” However, little has changed from the first External Review Draft in terms of EPA’s failure to incorporate sound science and impact analysis to support the Assessment’s conclusions. These problems were described in PLP’s (and other reviewers’) original comments. Without site specific plans, conclusions about a hypothetical project are premature, misleading and inaccurate.

In addition, I have serious concerns with USEPA’s statements about what was changed since the first draft and the completeness and accuracy of the three endpoints that the Assessment purports to evaluate. These concerns are described below.

### **What Has Changed Since the First Draft**

As stated in EPA’s Fact Sheet, the key changes to the revised the May 2012 draft assessment are listed below. EPA:

- “reorganized the assessment to better reflect the ecological risk assessment approach and to clarify the purpose and scope.
- refined the mine scenarios and explained how they are based upon worldwide industry standards for porphyry copper mining and specific preliminary mine plans submitted to state and federal agencies related to the Pebble Mine project.
- incorporated modern conventional mining practices into mine scenarios and clarified that projected impacts assume those practices are in place and working properly.
- added an appendix describing potential methods for compensating for impacts to wetlands, streams and fish.

- added additional details about water loss and water quality impacts on stream reaches, drainage of waste rock leachate to streams, and mine site water balance to assessment of potential mine impacts.
- expanded information on the potential transportation corridor to include analysis of diesel pipeline spills, product concentrate spills, truck accidents involving process chemicals and culvert failures.”

Each of these six described changes is discussed below.

#### Reorganized to follow USEPA’s Ecological Risk Assessment Approach

USEPA no longer refers to the assessment as a watershed assessment (which it never was) and refers to the work as simply an “assessment.” The reorganization of the work presented in the Assessment does not improve consistency with the EPA’s ecological risk assessment (ERA) methodology. The Assessment claims to be an ERA (pg 2-1), but that type of analysis is reflected neither in its title, nor in its methodology.

#### Refined the mine scenarios, based upon worldwide industry standards

The mine scenarios presented in the Assessment do not reflect worldwide industry standards for porphyry copper mining. Throughout the document, EPA presumes a level of environmental performance by the mining industry that is erroneous: it would violate current State of Alaska and federal laws. Contrary to statements in Chapter 6 of the report (page 6-1, par. 2), the three mine scenarios do not represent realistic or plausible descriptions of potential mine development alternatives, and they are not consistent with current engineering practice and precedent.

The three mine size scenarios examined in the Assessment, referred to in the assessment as “Pebble 0.25”, “Pebble 2.0”, and “Pebble 6.5”, do not reflect specific preliminary mine plans submitted to state and federal agencies related to the Pebble Mine project. EPA promotes the gross misperception that the Assessment directly addresses a specific project and bases every finding and conclusion in the Assessment on a hypothetical Pebble mine design; which is contrary to the statement in the assessment that *“It is not an assessment of a specific mine proposal for development”*. Despite not having any specific information on the mine design or proposed mine operations, USEPA characterizes the impacts presented in Chapter 7 (Mine Footprint) as inevitable (pg 7-1) and fails to acknowledge the high level of uncertainty with their approach. This alone is a fatal flaw of the Assessment.

#### Incorporated modern conventional mining practices into mine scenarios and clarified that projected impacts assume those practices are in place and working properly

EPA claims that ‘best practices’ and modern practices have been used and that it has discounted some of the older mine sites (e.g. the Coeur D’Alene mines) but those claimed changes are not evidenced by the Assessment. The assumed controls are not regarded as ‘good practice.’ In particular, the mining, transportation, water management, and pipeline scenarios continue to assume construction and routine operations that will not meet current regulatory requirements. A few examples include:

- The assumed standards for the installation culverts for the road crossing of streams is are speculative and outdated. The conclusions of substantial damage to streams and blockage of fish passage are predicated on the assumption of undersized and improperly installed culverts. The

USFWS's Fish Passage Program has shown that with appropriate modern designs, the probability of culvert failure can be dramatically reduced.

- Leakage during routine operations assumes that no seepage control measures are in place, a design that would not be permitted.
- The Assessment describes two dam failure scenarios – a partially full dam and a completely full dam. The completely full dam scenario assumes that the TSF is completely full to the crest of the dam. This condition would violate the mine's permit: dams are required to maintain a safe level of freeboard.
- The data sets used to assess tailings dam and pipeline failures are not representative of the state-of-the-practice design, monitoring and regulatory oversight that will be used for a mine project.

Throughout the document, the EPA presumes a level of environmental performance by the mining industry that is long outdated and would violate current State of Alaska and federal laws.

Added an appendix describing potential methods for compensating for impacts to wetlands, streams and fish

The Appendix provides a general overview of mitigation concepts and basically concludes that sufficient compensation measures do not exist that could address assumed impacts of the hypothetical scenarios. The permitting process would address all mitigation measures, including avoidance, minimization and mitigation, to address direct and indirect impacts.

EPA creates a series of assumptions based on a limited watershed scale where they assume mitigation must occur. That is, EPA assumes a watershed scale with only the UT, SFK, and NFK watersheds. There is precedent for larger watershed scales in Alaska, which EPA fails to acknowledge.

The Assessment's premature dismissal of effective mitigation is a flawed approach that attempts to discount an essential element of the permitting process.

Added additional details about water loss and water quality impacts on stream reaches, drainage of waste rock leachate to streams, and mine site water balance to assessment of potential mine impacts

The Assessment makes many invalid assumptions about tailings storage operations, and in particular about water and waste management practices. .

It ignores the fact that standard mining practices and designs include seepage control measures that are monitored and maintained; it goes as far to assume that water would be directly discharged to streams even if water quality standards are not met. The permit would not allow such a discharge. It makes estimates of total seepage rates for different assumed mine scenarios, which do not account for seepage control features that would be part of any new tailings storage facility (TSF) dam design in Alaska.

Expanded information on the potential transportation corridor to include analysis of diesel pipeline spills, product concentrate spills, truck accidents involving process chemicals and culvert failures

Although the Assessment claims to have expanded the information related to spills and fate and transport, the analyses of spills and failures are not thoroughly documented and the claimed potential impacts are not supported. A few examples are provided below.

- The Assessment evaluates a release from a full-bore rupture (worst-case scenario) but lumps all data from all types of spills and pipeline failures together to assess this one type of rupture. This is a flawed approach. Further, the report does not provide key parameters to technically evaluate the accuracy of the mass estimate and the reasonableness of the consequence evaluation. Showing these parameters is standard practice in any scientific analysis and would allow a critical assessment of the release scenarios and assumed impacts. Without this information, there is nothing to substantiate the conclusions.
- As stated in earlier PLP review comments, the Alaska Dept. of Transportation & PF Alaska Dept. of Fish & Game Memorandum of Agreement represents the minimum design generally required by permitting agencies. However, the Assessment continues to neglect modern designs for stream crossings and fish passage. Further it contradicts itself in the evaluation. The report states that “standards for culvert installation in fish-bearing streams in Alaska consider road safety and fish passage, but not the physical structure of the stream or habitat quality” (page 10-28, paragraph 1). However, in Table 10-2 the Tier 1 design method description states that “The Tier 1 approach most clearly replicates natural stream conditions...” (page 10-29). A Tier 1 design, by definition, considers the physical structure and habitat of the stream. The text is contradicted by the information presented later in the box.
- The Assessment has used estimates of culvert failure rates that do not apply to the design standards that will be used for culverts. The risks should be reevaluated using more appropriate data sets that better represent potential failure rates of culverts built to the relevant design standards in order to give decision makers a better understanding of the actual risks and in relation to the significance to salmon and other fish in these waterbodies .

### **Endpoints the Assessment claims to consider**

The Assessment states that it has three endpoints:

- 1) the abundance, productivity, or diversity of the region’s Pacific salmon and other fish populations;
- 2) the abundance, productivity, or diversity of the region’s wildlife populations; and
- 3) the viability of Alaska Native cultures. Each of these endpoints meets the criteria of ecological relevance, management relevance, and potential susceptibility to stressors associated with large-scale mining.

The unfortunate fact is that the Assessment does not really quantify impacts or risks to any of these endpoints.

The Assessment does not discuss mining effects on the abundance, productivity or diversity of the region’s salmon or other fish populations, but rather simply reports on the estimated impacts to stream channels and wetlands. For example, regarding sockeye salmon, the average annual inshore run of sockeye salmon (the key fish species identified in the Assessment) in Bristol Bay was 37.5 million fish between 1990 and 2009 (pg 5-11). Based on the highest index spawner count over a 5 year survey period, approximately 90,200 sockeye salmon were estimated in the Mine Scenario watersheds, (which include the South and North Fork Koktuli Rivers and the Upper Talarik Creek, Table 7-1 on pg 7-13).

These fish represent about 0.2% of just the returning sockeye salmon, and a much lower percentage of the total population. Although this is a crude estimate, it provides an order of magnitude sense of the potential project effect on fish populations, which the Assessment fails to provide.

The Assessment then leaps to conclusions regarding risks to the region's wildlife and Alaska Native cultures based on assumed impacts to salmon, which it never quantifies. Thus, no meaningful conclusions regarding the potential risks to wildlife or Alaska Native cultures can be drawn from the Assessment.

### **Future Activities**

I would also like to provide our views about where EPA should go from here. I understand that the BBWA was, from its inception, a response to several petitions asking EPA to use its Section 404(c) authority in an unprecedented manner -- vetoing a permit before it had even been applied for. EPA's desire to obtain more information before responding to such a request is understandable.

Putting aside legal problems with the petitions, what has become apparent is an underlying flaw inherent in the petitions themselves. Until a permit has been sought, the mining practices that will be employed, the impact minimization measures that will be required, and the compensatory mitigation plan that will be implemented are all unknown. Many of the independent peer reviewers (selected by EPA) of the May 2012 draft BBWA identified these unknowns as critical defects in that draft Assessment. Without this information, the risk scenarios are based on guesswork. If the risk scenarios are guesswork, so is the impact analysis.

Continuing this process would surely entail an extraordinarily inefficient use of taxpayer dollars. EPA will not know whether it has guessed correctly until after a permit application has been submitted, and even then -- because the project details can change during permitting -- the risk scenarios would be subject to change. This fact alone should dictate that EPA not use the assessment as the basis for a preemptive veto as requested by the petitioners. No environmental harm could occur in the interim because the project cannot be built before a permit is issued.

Accordingly, I suggest that EPA: (1) provide the public comments to the peer reviewers; (2) allow the peer reviewers to finish their evaluation of the latest draft report; and then (3) suspend all further work on the Assessment. EPA can refer to the Assessment as appropriate after PLP has submitted a Section 404 permit application. The lesson of this experience is that any substantive decision on the petitions at this time would be premature.

### **Conclusion**

Given the lack of analysis to support the spatial scales claimed to be evaluated, flawed assumptions, omission of mitigation and minimization measures, and conclusions unsupported by adequate technical information, the Assessment is an inadequate basis for a permitting decision for the Pebble Project. This project, like any other, should be evaluated pursuant to the normal Environmental Impact Statement ("EIS") process under the National Environmental Policy Act ("NEPA").

Under a separate submittal, PLP has also provided scientific and technical reviews from experts with notable experience in the mining industry and in various relevant scientific disciplines. They contain additional important points that have not been included in this letter, but should be carefully considered before the Assessment is finalized.



We appreciate this opportunity to comment on the Assessment, and we hope that USEPA will endeavor to correct the critical flaws in the current draft.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John Shively". The signature is fluid and cursive, with a long horizontal stroke extending to the left.

John Shively  
Chief Executive Officer